Refurbishers

LEAD CONTRIBUTORS TO INSIGHTS REPORT:

PCs for People
Sage Sustainable Electronics
Human-I-T
Refurbishers

Potential Partner Organizations

After-School Oromo Youth Program
Columbus Metropolitan Library - Branches
Columbus Metropolitan Library - Outreach / Senior Services
Columbus State Community College
Dress for Success
Franklin University
Goodwill Columbus
Jewish Family Services
OhioMeansJobs
Per Scholas
Reeb Avenue Center
St Stephen's Community House
T-Cetra
Van Buren Shelter
Westerville Area Resource Ministry
Objective: Inform the efforts of the Franklin County Digital Equity Coalition to deliver digital equity.

Use Case: Guide for funding decisions and implementation plans within the greater Columbus area.

This research is meant to be complimentary with external research as it is not a full comprehensive list of insights and solutions.
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Qualitative and quantitative research spanned
8 months, 2 quantitative surveys, 2 affordable internet pilots, 1 online tool prototype, and 12 human centered design sprints

- **1,839** Franklin County residents, from **40 different zip codes**, surveyed on their internet usage
- **55** residents engaged over an estimated **88** hours of in-depth interviews or co-design sessions
- **298** residents completed enrollment survey for Cbus internet pilots, **70** completed device pickup

Residents helped us understand and reframe the problem.

**We need fast, high quality internet.**
The need for internet extends to households of all socioeconomic levels.

**We need more transparency.**
Free or low-cost plans exist, but there is little trust in ISPs in delivering fair and transparent terms.

**We need affordable internet.**
Cost is a top barrier for internet services.

- One Use Case Is No More Important Than Another
- Unreliable Internet Is Normal
- Responds Well To Greater Transparency
- Word-Of-Mouth Conversations Are Highly Influential
- With More Partners Involved, Trust Increases
- Anything Free Brings Suspicion
- There Is No Standard Price For Connectivity
- Residents Deserve Better Internet for What They Pay
DIGITAL EQUITY COALITION OVERVIEW
Franklin County Digital Equity Coalition

A coalition of 30+ organizations working to achieve digital equity

VISION
To achieve digital equity through universal residential broadband adoption in order to ensure Franklin County residents have the tools necessary to support education, health, well-being, economic prosperity, and the ability to fully participate in society.

WORKING GROUPS
- Broadband Affordability and Access
- Device Access
- Digital Life Skills and Technical Support
- Advocacy for Broadband Funding and Policy

2021 ACTIONS
- 3 Summer STEM Camp Initiatives
- 2 Neighborhood based Affordable Internet Pilots
- 1 Internet Comparison Tool prototyped and tested.
A coordinated community response and collaboration

**FRANKLIN COUNTY DIGITAL EQUITY COALITION MEMBERS:**

- AECOM
- Affordable Housing Alliance of Central Ohio
- BroadbandOhio
- CAS
- Catholic Social Services
- Central Ohio Primary Care
- City of Columbus
- City of Dublin
- City of Westerville
- CMHA
- Columbus City Council - Office of Elizabeth Brown
- Columbus City Schools
- Columbus Foundation
- Columbus Metropolitan Library
- Columbus Partnership
- Columbus State Community College
- Central Ohio Transit Authority
- Creative Housing|Creative Renovations
- Franklin County Board of Commissioners
- Franklin County Department of Jobs & Family Services
- Goodwill Columbus
- Ice Miller
- Jewish Family Services
- JPMorgan Chase & Co.
- Mid-Ohio Regional Planning Commission
- National Digital Inclusion Alliance
- Ohio State University Wexner Medical Center
- One Columbus
- Partners Achieving Community Transformation
- Wexner Medical Center
- Renter Mentor
- Smart Columbus
- TECH CORPS
- The Wells Foundation
- The Women's Center for Economic Opportunity
- Vertiv
- Workforce Development Board of Central Ohio
- YWCA

- More than 30 public, private, and nonprofit entities
- Working to create long-term solutions to digital equity
- Digital equity is integral to achieving economic, educational, racial, and social equity.
- Learn more at [www.franklincountydigitalequity.org](http://www.franklincountydigitalequity.org)
Franklin County is preparing a holistic approach to digital equity.

DEMOTUGRAPHICS OF FOCUS
- Low Income Residents
- Underserved Zip Codes
  - Rural and urban within Franklin County
- New Americans
- Senior Citizens
- Students
- Working Adults
- People living with Disabilities

INTERNET USAGE USE CASES
- Education
- Telehealth
- Work from Home / Workforce Dev
- Research
- Home Management
- Well-being

CROSS-SECTOR COLLABORATION & CO-DESIGN
- Public agencies
- Private sector companies
- Human Services Agencies
- Non-profits
- Funders / Foundations
- Residents

CONNECTION STATUS PERSONAS
- Deliver access using these models

INTERNET NEEDS ARE MET
- Introduction to Technology
- Using Technology in Life
- Using Technology at Work
- Careers in Technology

DIGITAL SKILLS CONTINUUM
- Empower residents with skills

NO ACCESS AT HOME
- Don't have device

HAS INTERNET, NEEDS ARE UNMET
- Need more devices for household

DEVICIE ACCESS USE CASES
- Need different device type
Introduction to Technology
- Devices & Usage
- Email & Messaging
- Internet Basics
- Safety & Privacy

Using Technology in Life
- Telehealth
- Social Media
- Banking
- Community Resources

Using Technology at Work
- Customer Service
- Productivity Software
- Communication Platforms

Careers in Technology
- Career Exploration
- Education/Training
- Credentials
- Employment Opportunities
PROBLEM STATEMENT & SCOPING
Cbus WiFi Pilots

1. Draft initial features of pilots to **inform** RFP
   ○ Received X responses

2. Review proposals, vet and **select** vendors
   ○ Selected two

3. Work with vendor to **install technology**
   ○ On roof of Reeb Avenue Center and Mount Vernon Plaza
Cbus WiFi Pilots

4. **Test quality** of service (speed, reliability)
   ○ Many, many speed tests.

5. Setup implementation routines for **monitoring quality**
   ○ Visits to rooftops and in van around town

6. **Measure impact**

7. **Track industry trends** to inform scaling and long-term implications.

8. **Change course** if necessary.
Long-term Solution

5. Build a **Business model**
   - Define scale of implementation
   - Project timeline for build-out
   - Research need across city
   - Consider household numbers, income levels

6. Issue **RFP**
   - Assess business models proposed
   - Consider viability of scale, impact
   - Assess financial and legal risks

7. **Review proposals**, vet and select vendors

According to the Franklin County Digital Equity Coalition Framework:

- 108,000 of Franklin County’s 522,000 households (18.8%) did not have home internet subscription.
- About 50,000 households in the county (9.6%) had internet access only through a cellular data plan.
- 48,000 Franklin County households had no form of internet access in their home.
- Residents 65 and older were nearly three times more likely to lack a computer or home internet subscription than were residents under the age of 65.
- 11.3% of Hispanic/Latino and 11.8% of Black/African American residents lack a computer or home internet subscription.

U.S. Census, 2019 American Community Survey 1-Year Estimates
Scoping the Problem

National studies articulate the vast nature of the Digital Divide.

One out of five Franklin County residents do not have a cable modem, digital subscriber line (DSL), or fiber Internet accounts in 2019.

- The American Connectivity Program (ACP) is a $14B broadband subsidy that starts in 2022.
- The recommended minimum WiFi speeds by 2030 will be 100mbps for download and 25mbps for upload.
- Many tech companies are improving their commitment to digital inclusion, however, progress is slow.
- A 2021 federal infrastructure law dedicates $65B to broadband infrastructure over the next 5 years.
Local initiatives aim to create prosperity for our entire community, and make us more resilient in the face of future challenges.

- Even in economically challenged neighborhoods, one or more high speed internet providers is available for consumer internet services.
- In Franklin County, less than 44,000 households (8%) are subscribed to Emergency Broadband Benefit (EBB).
- The city of Columbus has built over 1,000 miles of fiber infrastructure.
- The Recovery and Resiliency Advisory Committee estimates 77,000 poorly connected Franklin County households in low-income neighborhoods.

There is a correlation between internet access, school online education system access, and poverty levels.
Scoping the Problem

Systemic Barriers Inhibit Access for Low-Income Residents.

DIGITAL REDLINING
- ISPs target high-income neighborhoods to update their infrastructure.
- Digital Redlining occurs when low-income areas are thereby affected by having limited WiFi speeds.

TIER FLATTENING
- Large ISPs converted many of their lower-speed infrastructure to the same price.
- This tier flattening gives residents with poor infrastructure a low quality-to-price value.
INTERNET ACCESS & AFFORDABILITY

Scoping the Problem

A survey in partnership with Franklin County Jobs & Family Services further articulated use cases and needs.

DESIRABILITY

77% say internet access is a top priority alongside rent, food and transportation.

Only 3% indicated they don’t need home internet.

95% use the internet in their home daily.

USAGE

The most popular uses for internet are paying bills, searching information, and tasks for work.

Household size of 2.4 people using WiFi.

21% have someone outside household that depends on their internet connection.

SAMPLE SIZE & METHODOLOGY

● 1839 residents that receive benefits completed the survey.
● Survey distributed via email to 120,000 individuals; 1.5% responded.
● Oct. 7th, 2021-Oct 15th, 2021
● There is a 95% confidence level (2.5% margin for error).

WHO COMPLETED SURVEY

“While I am not tech savvy, I do need to have at least basic internet/WiFi in my home.” — Chris

ZIP CODES

We received responses from 40 zip codes in the Central Ohio, including:

● 8 Opportunity Neighborhoods of City of Columbus
● 5 Poverty Blueprint areas of Franklin County

TOO SMALL

A survey in partnership with Franklin County Jobs & Family Services further articulated use cases and needs.
Scoping the Problem

Map of Zipcodes Surveyed

Poverty Demographics (ACS 2020)

Percent of Households with no internet access (ACS 2020)
HUMAN-CENTERED DESIGN APPROACH
A partnership to deliver the multiple facets of human-centered design

**THE COLUMBUS FOUNDATION**
Assisting in strengthening and improving our community for the benefit of all its residents.

**Role in the Work**
- Understanding insights that build empathy around issues related to the digital divide.
- Delivering an empathy-based approach to inviting residents to define community needs and co-design new ideas to address those needs.

**SMART COLUMBUS**
To anticipate and advance what is new and next at the intersection of technology and community good.

**Role in the Work**
- Researching, designing/building and testing human-centered products and services to address the digital divide.
- Delivering a series of iterative design sprints focused on user testing and prototyping in collaboration with residents.
Columbus was named a Mayors Challenge Champion City.

**HIGHLY SELECTIVE**
631 cities from around the world submitted applications.

Of 50 selected cities, 15 will win $1 million each—to help them implement their breakthrough ideas and, ultimately, to spread their ideas to other cities around the world.

**SUPPORT PROCESS**
Over the course of 4 months, the city was coached by an advisor on how to make our research human-centered, thorough, and impactful.

In 2020, Bloomberg Philanthropies invested in 170 countries around the world and over 800 partner cities.

**TIMELINE**
- **JUNE 2021**: Champion Cities Announced
- **JULY-OCT 2021**: Leverage Human-centered Design for User Testing & Prototyping
- **OCT 2021**: Submit $1M Grant Proposal
- **LATE DEC 2021**: Winners Notified
- **JAN 2022**: Winners Announced

**URBAN INNOVATION IN CITIES:**
Out of the 50 Champion Cities of the 2021 Global Mayors Challenge, 16 are in North America, including:

- **Akron, Ohio**: Taking lessons from how we train medical students to support Black entrepreneurs
- **Baltimore, Maryland**: Deploying a citywide, coordinated system to support Black owned businesses
- **Birmingham, Alabama**: Investing in the next generation of food entrepreneurs
- **Columbus, Ohio**: Providing last-mile Wi-Fi access to underserved neighborhoods
- **Durham, North Carolina**: Building a team to help residents access untapped federal resources and support
- **Guadalajara, Mexico**: Creating a “citizen-safety index” to combat violent crime
- **Hermosillo, Mexico**: Providing new employment opportunities for women in the circular economy
- **Lansing, Michigan**: Launching cross-sectoral partnerships to halt learning loss in children
- **Long Beach, California**: Using the city’s power to bring transparency to the gig economy
- **Louisville, Kentucky**: Creating the diverse tech workforce of the future
- **New Orleans, Louisiana**: Bringing a trust-building lens to the delivery of public services
- **Newark, New Jersey**: Reducing crime by focusing on the city’s most persistent offenders
- **Paterson, New Jersey**: Providing proven, on-demand treatment to those struggling with opioid addiction
- **Phoenix, Arizona**: Deploying “career mobility units” to support job-seekers
- **Rochester, Minnesota**: Creating a pathway for women of color into the growing, high-paying local construction field
- **San Jose, California**: Bolstering the college-support pipeline for marginalized families
INTERNET ACCESS & AFFORDABILITY

Who We Engaged

Residents helped co-design and test ideas.

- 1839 Franklin County residents surveyed on their internet usage (from 40 different zip codes)
- 55 residents engaged over an estimated 88 hours of in-depth interviews or co-design sessions
- 298 residents completed enrollment survey for Cbus WiFi pilots, 70 completed device pickup

RESIDENT ENGAGEMENT

- All residents engaged live in City of Columbus Opportunity Neighborhoods:
  - representing ~77,000 total households in Franklinton, Hilltop, Linden, Near East, Northland, Near South, Southeast, and Northeast
- Households represent varying situations of connectivity including:
  - Dependency on internet for work/school
  - Using EBB
  - Looking to switch providers
  - Late on payments or close to being cut off

USER TESTING & PROTOTYPING

- 2 Internet service pilots were deployed to 53 households; in-depth feedback from 5 residents. (As of 12/14/2021)
- Cbus WiFi services were beta-tested before launch to an anticipated 600 residents.
- A prototype of the Internet Comparison Tool was developed with in-depth feedback from 12 residents.
- Prototype concepts were informed by co-design sessions with residents.
- Qualitative and quantitative research spanned over 8 months.
- Insights were synthesized across 12 design sprints (workstreams).
WHAT WE LEARNED
Early Adopters of Free Internet Pilot
User Journey Enhancements

We learned 44,000 to 77,000 households are not connected to home internet.

1. AECOM Report
We learned 12% of Bronzeville residents reportedly live without any internet access (2020)

2. King-Lincoln/AECOM Report
We learned 12% of Bronzeville residents reportedly live without any internet access (2020)

3. Digital Equity Co-Design
4. South Side Internet Co-Design
5. Beta Pilot South Side
6. Program Messaging Improvements
7. QUANTITATIVE Pilot Interest Forms
We learned 31% of interested residents did not have a home broadband subscription

8. Early Adopters of Free Internet Pilot User Journey Enhancements
9. Beta Pilot: Starry/King-Lincoln Bronzeville
10. Beta Pilot Feedback: King-Lincoln Bronzeville
11. Prototype Test of Internet Affordability Comparison Tool
12. Basic Internet Needs
13. Changed Tech Configuration (and ultimately the service provider)
14. QUANTITATIVE: Internet Needs w/ Franklin County Jobs & Family Services
We learned 57% of subsidy receiving households would be extremely interested in a $15/month internet option, and wrap around services would promote adoption.

15. Digital Navigator Scoping
16. Scaled Pilot Deployment
17. Culminating Qualitative Insights Report

Insights were informed by and validated across design sprints.

PHASE 1

PHASE 2

KEY
- Quantitative Research
- Qualitative Research
- Delivered Initiatives
- Direct Influence
- Indirect Influence

HMW ensure people experiencing poverty can use technology in all the ways they want to and need to?

HMW ensure residents have the information they need to get internet they want?
Key Insights

What We Heard From Residents

- One use case is no more important than another
- Responds respond well to Greater Transparency
- With More Partners Involved, Trust Increases
- Anything Free brings Suspicion
- Word-of-Mouth Conversations are Highly Influential

Validated by:
- Sprints 1, 2, 11
- Sprint 3
- Sprints 4, 5, 6, 7, 8, 9
- Sprints 10, 12, 13
All residents deserve access to support education, health, well-being, economic prosperity, and the ability to fully participate in society.

**GOVERNMENT’S ROLE**

“I wouldn’t feel bad if the local government was involved… They talk about it like it’s an extra expense. COVID proved it’s not.”

– Cora

**BASIC LIVING REQUIREMENTS**

“Everyone should qualify because it’s becoming a primal need to have internet. Internet allows people to live.”

– Jennifer

**TELEHEALTH & JOB TRAINING**

“I have doctors appointments online and am doing a workforce training through my job.”

– Kyra

**WORK FROM HOME**

“If I actually want to make money, I need [my WiFi] to work.”

– Megan

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**USE CASES**

- Education (Homework, Learning)
- Telehealth
- Work from Home / Workforce Dev
- Research (Finding Deals, Reading News)
- Home Management (Bills, budgeting, meals)
- Well-being (Community Connect, Gaming Entertainment)

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**FRANKLIN COUNTY DIGITAL EQUITY COALITION**

**Potential Fixer** Policy to broaden the needs of internet beyond k-12 schooling
Residents have been hurt in the past by unclear messaging including hidden fees, extended contracts, unknown costs and limited service.

MESSAGING CONSIDERATIONS
- Clear terms and conditions
- Communicate all fees and potential costs
- Clarification and rationale for eligibility
- Sensitivity to messaging of “free”
- Transparency of funding source

Key Insights

Nuances in Messaging and Greater Transparency are Beneficial

NO COST INSTEAD OF FREE
“Device is unclear on what exactly it is, I didn’t immediately think [modem/router].”
– Devin

FUNDING PILOTS
“If it’s free, where is the funding coming from and why do I qualify?”
– Jen

DEFINING GEOGRAPHY FOR PILOTS
“I would like to know why you chose the neighborhood.”
– Taylor

RESEARCHING TERMS
“I’d have to do some research, read reviews.”
– Cierra
A community-based approach leveraging organizations that residents trust will increase adoption.

**SCHOOLS**

“I feel better when I see that they are working with school districts and the library.”

– Delisa

**LIBRARY**

“Libraries have information catered for people and no ulterior motives.

– Devin

**COALITION APPROACH**

“Coalition of organizations would be best because that means everyone is coming together as a common good.”

– Jennifer

**GRASSROOTS ORGANIZATIONS**

“I really respect Food Soldiers. They are doing a really good job in the community. I would trust information from their people.”

– Elizabeth
Just because a service is free does not mean it will be readily adopted. Residents are skeptical of free services.

**LOW QUALITY**
“[Free] would be great. My only concern would be how reliable and consistent it would be.”
– Branden

**HIDDEN TERMS**
“If something is free, I want to look for hidden messages, quality, and how long is it free.”
– Juliana

**ELIGIBILITY**
“I like no hidden fees and no cost [better than ‘free’] because it eliminates anxiety of any possible curveballs.”
– Devin

**LACK OF CLARITY**
“If you are giving me more free stuff in addition to the tablet, what are you taking from me?”
– Jenn

**QUESTIONSPOSED OF FREE SERVICES**
- Is it a lower quality than fee-for-service option?
- What is the catch?
- Will you be monitoring and selling my data?
- Will I be surprised later by high cost services when trial ends?
- Who did you select who receives free service? Why am I more deserving than others?
Peer-to-peer resident advocacy plays a key role in marketing a new service like internet connectivity.

**Neighborhood Relations**

“In my neighborhood, our neighbors, we all talk a lot. We trust each other. What’s going on in people’s houses. We trust each other.”

– Stephanie

**Sharing Services**

“I recommended my brother a new service because he was sharing the WiFi.”

– Tina

**Power of Negative Reviews**

“My neighbors told me that [my current provider] was garbage. They are kinda retired and they know a lot about the neighborhood.”

– Tara

**Trial by Friend**

“My friend and I will see how this internet is. I know he has a laptop and so I will see what he says.”

– Michael

**Key Insights**

**Trusted Communication Channels**

- Neighbors
- Friends & Family
- Caseworkers of Trusted Organizations
- Facebook Groups of Peers
- Advocates for Community Services (like Food Soldiers Group)

**Word-of-Mouth Conversations are Influential.**
Guiding Question

Equitably close the Digital Divide by providing fast and affordable internet with co-designed engagement programs, increasing residential connectivity in low-income neighborhoods.

PROBLEM FRAMING
We seek to solve three problems simultaneously:
- unaffordability of residential internet,
- inadequate speed of affordable internet,
- an estimated 48,000 low-income Columbus and Franklin County families living without residential internet.

MARKET SIZING
We surveyed low-income residents and found:
- 76% believe home internet is as vital as rent, food, and transportation.
- 88% without home internet indicated cost as a top barrier;
- 50% of total respondents indicated experiencing frequently unreliable service.
- Only 10% pay less than $25 a month.
  ○ A 2018 NDIA report cited Internet Service Providers (ISPs) eliminated cheaper rates forcing customers into higher-cost plans for the same quality.
3 PILLARS OF DIGITAL EQUITY

Connectivity  Device Access  Digital Life Skills
Connectivity & Affordability

Insights, Personas, Barriers, and Solutions
Insights From Residents

Unreliable Internet is Normal

Cost is a Top Barrier

There is Little Trust with ISPs

The need for adequate internet is All-encompassing

Residents Don’t Know they Deserve Better

PRIMAR Y CHALLENGES
- Access
- Quality
- Price/Affordability
- Awareness
- Government Aid
- Branding/Collaboration

CURRENT INTERNET PROVIDERS
- Starry
- T Mobile
- Wow!/Atlantic Broadband
- Spectrum
- AT&T
- Cbus WiFi

USER GROUPS / PERSONAS
- Highly Disconnected
- Data Plan Only
- Low-Income Plan
- Paying Too Much
- Needs Higher Speeds
- Connected and Satisfied

EVERYONE SHOULD HAVE QUALITY, AFFORDABLE INTERNET

NO USE CASE IS MORE IMPORTANT THAN THE OTHER

TRUST IS COMPLICATED IN THIS SPACE

CHEAP/FREE IS NOT EXPECTED TO BE GOOD - BUT ADEQUATE INTERNET SHOULDN'T BE MORE THAN I CAN AFFORD

QUALITY IS NOT RELIABLE

NEED INSIGHT THEME FOR DEVICES & SKILLS

Unreliable Internet is Normal

Cost is a Top Barrier

There is No Standard Price for Connectivity

Residents Don’t Know they Deserve Better
**INTERNET ACCESS & AFFORDABILITY**

**Insights From Residents**

**Quantitative**
- 40% consider their WiFi too slow or unreliable.
- 27% experience unreliable internet multiple times a week.

Q27 - How frequently do you experience unreliable internet in your household? (Such us no connection or service so slow you can’t use it)

- Multiple Times a Day: 8%
- Once a Day: 4%
- A couple of times per week: 15%
- A couple of times per month: 23%
- Every other month: 15%
- Once or twice a year: 24%
- Never: 11%

**Qualitative**
- A common thread between all user personas is the need for faster service.
- Reliability is key to quality internet service.

“I do a gateway reset every day because my devices start lagging.”
– Brooks

“From the numbers it seems like I’m not getting a good quality at all.”
– Tara
**Insights From Residents**

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**Cost is a Top Barrier**

### Quantitative
- Of people without home WiFi, 89% mention cost as a very important factor at the least.
- For 25% of Franklin County Residents living on less than $35K annually, $60 per month for WiFi is at least 2% of their total income.

### Qualitative
- Frustration occurs when cost and quality do not feel aligned.
- There is no standard price for accessing the internet.

---

**Q11** - How Important is cost for why you do not have home internet/WiFi? (n=153)

- **Extremely Important**: 73%
- **Very Important**: 16%
- **Moderately Important**: 5%
- **Slightly Important**: 6%
- **Not at all Important**: 0%

---

**Insights From Residents**

- "they keep raising the prices. It's not really getting any better. The prices don't really match the quality."
  – Mey

- "If I am paying like 12 dollars shy of 100, that's not right... Doesn't matter who I have or how high of a speed I get, it still cuts out."
  – Taylor

---

**FRANKLIN COUNTY DIGITAL EQUITY COALITION**
There is No Standard Price for Connectivity

Quantitative
- Of the 298 Pilot Program Enrollment Survey Submissions:
  - 31% indicated they did not have residential internet
  - And the rest paid...

```
Q23 - How much do you currently pay for home WiFi access each month?

- $0 - $25: 10%
- $26 - $50: 18%
- $51 - $75: 29%
- $76 - $100: 22%
- $100+: 12%
- Unsure: 8%
```

Qualitative
- Prices for WiFi range from $0 (EBB) to $176 a month
- Household size does not necessarily correlate to monthly WiFi expenses.

"We pay $176 a month just for internet. I lost my job so we can’t afford it, but I still need it for [my GED] and for applying for jobs.”
– Tamara

"During COVID, my work hours went down…I learned about and applied for SNAP. It got me reduced internet ($10/month).”
– Cierra
There is Little Trust with ISPs

**Quantitative**
- 50% of beta pilot research participants were recruited by Columbus City Schools (a trusted organization)

**Qualitative**
- Distrust with ISPs stems from greed and a lack of transparency
- Distrust with the government stems from privacy concerns

---

**Q7f - How might a group of trusted Community organizations providing a WiFi option impact your decision to join?**

- More likely to want it: 41%
- Wouldn't matter to me: 40%
- Less likely to want it: 6%
- I would not want it: 9%
- I am unsure: 8%

**Q7e - How might the Government providing a WiFi option impact your decision to join?**

- More likely to want it: 28%
- Wouldn't matter to me: 41%
- Less likely to want it: 13%
- I would not want it: 9%
- I am unsure: 9%

---

"Money grubbing scum... I don't like [my old service provider]. I don't like them"

– Jill

"I'm getting a third of what I'm paying for. That sounds like something they would do, larger corporations are always trying to finesse you."

– River
The Need for Adequate Internet is All-Encompassing

**Quantitative**
- 94.5% use the internet in their home daily.
- 76.5% say it’s a top priority alongside rent, food and transportation.
- 76.7% say it is at either ‘very important’ or ‘extremely important’ to maintaining their personal wellbeing.

**Qualitative**
- Many residents described themselves as dependent on their internet for both need-based tasks as well as entertainment.

> “Without access to the internet, there is no opportunity to work from home, entertainment, or learning.”
> – Kristen

> “When my provider cut me out, I streamed from the phone hotspot and sent it to the tv. I wasn’t going to be without internet.”
> – Tina

---

**Figure 1 - What are the three most important things for you to be able to do online?**

- Paying Bills: 17%
- Work: 16%
- Information: 14%
- Entertainment: 13%
- Doctors Appt: 10%
- Shopping: 9%
- School/learning: 8%
- Social: 7%
- Applying for Benefits: 3%
- Other: 1%

---

**INSIGHTS FROM RESIDENTS**

**INTERNET ACCESS & AFFORDABILITY**

**Cost equates to quality**

**Quote**

**FRANKLIN COUNTY DIGITAL EQUITY COALITION**
Residents Don’t Know they Deserve Better

Quantitative
- 61% of subsidy-receiving households were not aware of EBB.
- Only 15% of respondents had no complaints about their WiFi.

Qualitative
- Residents using EBB were hesitant to speak up about low speeds.
- Most research subjects did not know the speeds for their plan.
- The stigma of confusing technology is a barrier to learning more.

“You all got my eyes open with this speed test. I do it once or twice a day now, just to check.”
– Joseph

“I don’t know much about technology, you know the kids are more knowledgeable than I am.”
– Tanequa

Q24 - Have you taken advantage of the Emergency Broadband Benefit?

- Yes: 12%
- No: 27%

61% of subsidy-receiving households were not aware of EBB.
INTERNET ACCESS & AFFORDABILITY

Personas

Residents we engaged

- **55** residents over an estimated **88** hours of in-depth interviews or co-design sessions
- **1839** Franklin County residents surveyed on their internet usage*
- Residents live in City of Columbus Opportunity Neighborhoods
- Residents as they relate to personas/user groups:

<table>
<thead>
<tr>
<th>Persona</th>
<th># of People in Design sprints</th>
<th>Specific Residents We Engaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>No WiFi Naomi</td>
<td>6</td>
<td>John, Cierra, Michelle, Virginia, Debora, Delisa</td>
</tr>
<tr>
<td>Temporary-Fix Tony</td>
<td>5</td>
<td>River, Jill, Tara, Linda, Ashley</td>
</tr>
<tr>
<td>Searching Seth</td>
<td>6</td>
<td>Taylor, Tara, Elizabeth, Anibal, Phoebe, Mey</td>
</tr>
<tr>
<td>Stuck Stacy</td>
<td>8</td>
<td>Cora, Wanda, Branden, Kayla, Kaitlyn, Nicole, Jonna, Tilla</td>
</tr>
<tr>
<td>Need More Nyisha</td>
<td>8</td>
<td>Aisha, Tina, Michael, Joseph, Syreeta, Ronda, Kristina, Maggie</td>
</tr>
<tr>
<td>Connected Cassie</td>
<td>6</td>
<td>Susan, Kristen, Sherita, Zoey, Tanequa, Durrie</td>
</tr>
</tbody>
</table>

*Franklin County residents surveyed on their internet usage.

BENEFITS OF USER PERSONAS

“Personas help to focus decisions by adding a layer of real-world consideration to the conversation.” [usability.gov](http://usability.gov)

“Personas help designers to create understanding and empathy with the end-users.” [xd.adobe.com](http://xd.adobe.com)
Residents’ experiences and needs of in-home internet range.

**NO ACCESS AT HOME**

**No WiFi Naomi**
I don't have home WiFi.

**HAS INTERNET, NEEDS ARE UNMET**

**Need More Nylisha**
I pay a lot to get what I need and I still don't get what I need.

**Skeptical Sara**
I don't trust the large Internet Service Providers.

**EBB Brandon**
I pay the minimum and it sets my expectations low.

**Too High Terry**
I don't know there are low cost plans.

**INTERNET NEEDS ARE MET**

**Connected Cassie**
I pay a reasonable price for WiFi services that fit the needs of my entire family.
Personas

No WiFi Naomi

**Caring | Family-oriented | Data-dependent**

Naomi has no in-home WiFi. With her tight income, she has prioritized other spending particularly during the pandemic. Her job as an assistant at the local nursing home exhausts her, but she loves caring for others. She prioritizes her family and often has a home-full of guests.

**INTERNET USAGE**

**PREFERENCES**

**DESIRED USES**
- Her 8-year old granddaughter wishes she had WiFi when she visits for homework.
- Her 20-year old daughter wishes she could watch Hulu, but instead is stuck watching cable.
- Likes the idea of staying connected to her sister in Atlanta, but has not joined any social networks.

**KEY CHALLENGES**
- Embarrassed to not be connected;
- Intimidated by getting started – who to call, what is a fair plan, how to connect;
- Doesn’t feel confident using a computer or surfing the internet.

**MARKET SIZE**
- 8.3% don’t have residential broadband (JFS).
- 20.7% of households in Franklin County do not have residential broadband (US Census 2019).

**IDEA TO ADDRESS CHALLENGES**
- Digital Navigators can help to teach the necessary skills to become more digitally connected.

**GAPS IN UNDERSTANDING**
- Most of our outreach has occurred in digital channels. How can we reach this audience in an effective way?

**INTERNET ACCESS & AFFORDABILITY**

---

**FRANKLIN COUNTY DIGITAL EQUITY COALITION**

---
Personas

Temporary-Fix Tony
Resourceful | Budget-conscious | Handy

Bradon uses Emergency Broadband Benefit (EBB) for WiFi. Since COVID-19, he has struggled to find a stable job. He is a part-time seasonal worker at a department store to pay for the expenses of his large family. He has always been great with his hands and loves watching DIY construction projects.

MARKET SIZE
- 12.1% are using EBB (JFS)
- 6.4% of households in Columbus are receiving EBB (MORPC 2021)

INTERNET USAGE

DESIRED USES
- Playing an online board game with friends
- Searching through Facebook Marketplace for useful items
- Finding helpful construction tips on Social Media

KEY CHALLENGES
- Needs basic internet to search for jobs
- Feels frustrated with poor service

IDEA TO ADDRESS CHALLENGES
- Short-term pilots in opportunity neighborhoods will offer more reliable service than other low-income plans.
- Use speed tests to support self advocacy and community action

PREFERENCES

SPEED PREFERENCE

COST PREFERENCE

UNDERSTANDING/AGENCY

GAPS IN UNDERSTANDING

This market is complacent when experiencing poor quality on discounted services. How do we help them understand what they are entitled to?

I pay the minimum and it set my expectations low
Personas

STUCK STACY

Determined | Curious | Thorough

Sara is looking for an affordable provider. She lives in a 3-generation household and is the main provider for the family. She is a caring neighbor and often invites others to dinner. On weekends, she spends lots of the time in the kitchen preparing traditional meals with her grandfather.

INTERNET USAGE

DESIRED USES
- She is constantly checking her email for work
- Her 20-year old daughter is taking virtual classes for her community college.
- Her 2 sons enjoy spending lots of time playing racing games on their phones.

KEY CHALLENGES
- Feels stressed from WiFi needs of the whole family
- Feels a lack of trust with her current provider always trying to sell her more services

INTERNET ACCESS & AFFORDABILITY

54.8% complained that their current home Internet/WiFi is too expensive or has recently raised their monthly bill (JFS).

PREFERENCES

SPEED PREFERENCE
COST PREFERENCE
UNDERSTANDING/AGENCY

I don’t trust the large Internet Service Providers.

MARKET SIZE

IDEA TO ADDRESS CHALLENGES
- Resident Ambassadors to help inform residents of the intersecting pieces of the internet quality puzzle.

GAPS IN UNDERSTANDING
- Many people feel stuck with their providers. What factors most motivate this group to switch providers?
Personas

Cassie is happy with her home WiFi. She works virtually as a customer service representative. She posts consistently to her Facebook page and enjoys keeping up with the whereabouts of her extended family. At the end of every week, she looks forward to a relaxing movie night with her family.

**DESIRABLE USES**
- Working from home (ethernet)
- Her husband loves to scroll through Twitter for daily news
- Her 10-year old son is a dedicated viewer to his favorite Twitch streamers

**KEY CHALLENGES**
- Advocating agency to others who are unsatisfied with their current Internet Service Providers

**PREFERENCES**

I pay a reasonable price for WiFi services that fit the needs of my entire family.

**IDEA TO ADDRESS CHALLENGES**
- Teen STEM Camps will promote digital connection to their youth.

**MARKET SIZE**
- 15.9% do not have issues with my home Internet/Wifi (JFS).

**GAPS IN UNDERSTANDING**
- What are the biggest risks in taking this person away from being happy and connected?
Personas

Busily Organized Expressive

Terry isn’t aware of low-income broadband options. As a salesman, he is on the road a lot. When home, he makes sure to spend quality time with his wife and two daughters. He enjoys staying up-to-date on the latest sports news, which comes in handy when making small-talk.

MARKET SIZE
- 60.8% are not aware of the Emergency Broadband Benefit (JFS).
- 43.2% of households in Poverty are not receiving EBB (MORPC 2021).

INTERNET USAGE

DESIRED USES
- Support multiple devices for each of his children
- Occasionally tries to stream Columbus Blue Jackets games
- Scrolling through sports news late into the night

KEY CHALLENGES
- Needs basic internet to support his families WiFi needs
- Feels frustrated with high bills for what doesn’t even feel like good service.

IDEA TO ADDRESS CHALLENGES
- An unbiased comparison tool that shows low-income plans and helps bring awareness to available services and savings.

PREFERENCES

SPEED PREFERENCE

COST PREFERENCE

UNDERSTANDING AGENCY

I don’t know there are low cost plans.

CUMBERLAND RIDGE

INTERNET ACCESS & AFFORDABILITY

FRANKLIN COUNTY DIGITAL EQUITY COALITION

53
Personas

Nyisha wants a higher quality broadband service. She and her 3 roommates are very organized and great at sharing their belongings, but sharing their bandwidth is a different story. With multiple people working at home, it can be hard to prioritize certain tasks over others.

**MARKET SIZE**
- 41.4% complained about having slow or unreliable service (JFS).

**INTERNET USAGE**

**DESIRED USES**
- Uploading marketing content for her work
- Listening to streamed music while creatively exploring Pinterest
- Keeping multiple tabs open to track her many ongoing tasks
- Playing multiplayer combat games on her laptop

**PREFERENCES**

- **SPEED PREFERENCE**
- **COST PREFERENCE**
- **UNDERSTANDING/ AGENCY**

**KEY CHALLENGES**
- Feels frustrated that her enjoyment is limited to the quality of her WiFi
- Feels a lack of trust with her current provider not delivering what they promise

**IDEA TO ADDRESS CHALLENGES**
- Long-term fiber infrastructure can offer a higher quality broadband service.
- Regular audits to ensure that people are getting what they pay for.

**GAPS IN UNDERSTANDING**
- Fiber is expensive compared to other broadband options. Will enough people take-up this fiber option to make it a sustainable solution?

MERION VILLAGE

INTERNET ACCESS & AFFORDABILITY

MERON VILLAGE

FRANKLIN COUNTY DIGITAL EQUITY COALITION

54
Barriers/User Journey
Residents Face Barriers in Each Phase Towards Being Connected.

### Pathway to Adoption

**Barriers/User Journey**

- **Awareness**
  - Lack of Understanding
    - The information online is really confusing.
  - Lack of Motivation
    - I don’t have the time or energy to call my provider.

- **Consideration**
  - Lack of Transparency of Plans
    - I call the company to explore cheaper options, and they are selling me something totally different. The options they advertise aren’t what I get.
  - Multi-Unit Dwellings Have Contract with Single Provider
    - I live in an apartment building and they have an exclusive deal with AT&T so I can only buy a plan through them.

- **Acquisition**
  - Affordability of Adequate Speeds
    - I’d like a faster internet speed, but can’t pay more than $60 a month.
  - Lack of Service Availability
    - The only provider in my area gives me bad service.
  - Prior Debt/ Credit Score
    - Everyone in my new neighborhood says they are the best provider here, but I have unpaid bills from a long time ago, so they’re not an option.

- **Utilization**
  - Cancellation Fees
    - I need to end my plan, but I have to pay a cancellation fee so I guess I have to keep it.

- **Advocacy**
  - Lack of Confidence
    - I’m worried that if I give bad advice, people will blame me.
  - Poor Performance
    - It doesn’t matter how much I upgrade, it’s still bad.

### Potential Solutions

<table>
<thead>
<tr>
<th>Solution</th>
<th>✓</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Outreach Campaign</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Digital Navigators</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Internet Comparison Tool</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Fiber to the Home</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>EBB Promotion</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Resident Ambassadors</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
Solution Iteration
Temporary WiFi Pilots

Delivering Immediate Connectivity to Low-Income Neighborhoods

A Problem Worth Solving

It was found that students in 2 neighborhoods (Southside and King-Lincoln Bronzeville) had very low rates of CCS Students logging into their online learning portal.

Our pilot gave free connectivity to these neighborhoods by testing emerging last-mile fiber technologies.

Slow Adoption

Due to low initial interest, we were able to increase eligibility from CCS households to anybody within the neighborhoods. Even still, most users were recruited from CSS, a trusted organization.

Showing People their Options

Research Sprints suggest a general lack of awareness for these pilots and other low-income resources. An unbiased Internet Comparison Tool was conceived to give these residents more knowledge about their WiFi options.
INTERNET ACCESS & AFFORDABILITY

Temporary WiFi Pilots

In-Home WiFi Pilots Barriers/Improvements

Eligibility
About 50% of interested King Lincoln Bronzeville residents were too far to be connected

Awareness/Trust
Despite offering free service for an entire year, adoption was slow. We now use the term 'no cost'.

Performance
Not all of our service was meeting the 50/50 mbps speeds we were promising. We changed the technology to fix this.

Process
In the beginning, there were some inefficiencies. We worked with the provider to streamline the process.

To learn more about the program or direct residents to apply, visit: cbuswifi.com
INTERNET ACCESS & AFFORDABILITY

Internet Comparison Tool Learning Process

Market Analysis
Many e 50% of interested King Lincoln Bronzeville residents were too far to be connected.

Validating Need
We interviewed 9 residents and learned their knowledge and desires when choosing a service provider.

Refining Usability
Receiving feedback from users was helpful to learn how they interact with the tool and what was confusing.

Working with Developers
Showing our prototype to partner developers, we received notes on feasibility and estimated costs.
Device Access
It was unnerving to see I'm getting a third of what I'm paying for. That sounds like something they would do – larger corporations are always trying to finesse you. – River

Device Access

Cost equates to quality

Qualitative

● Many residents did not realize how many devices they used until listing them all out.
● Even Residents that live alone are using multiple devices at a time.
● On average, household size correlates to devices used.

Quantitative

● Of the 298 Pilot Program Enrollment Survey Submissions:
  ○ 85% had a device that can access the internet
  ○ 87% indicated they would like a tablet, smartphone, or laptop if it was offered through the program.
● The most commonly owned devices from the JFS Survey:
  ○ Smartphone (93%)
  ○ Laptop computer (70%)
  ○ Smart TV (68%)
  ○ Tablet (55%)

Q18 - How many Internet-using Devices do you have in your home?

<table>
<thead>
<tr>
<th>Number of Devices</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 or fewer</td>
<td>28%</td>
</tr>
<tr>
<td>4 to 8</td>
<td>46%</td>
</tr>
<tr>
<td>9 to 12</td>
<td>15%</td>
</tr>
<tr>
<td>13 to 20</td>
<td>7%</td>
</tr>
<tr>
<td>More than 20</td>
<td>4%</td>
</tr>
</tbody>
</table>

"[My household has] 13 devices total… Cut my devices in half? I can’t!"
– Tina

"I have a phone, a TV, and a tablet. I also got a Fire stick for my birthday. I would like a laptop, but can’t afford it right now."
– Shay
Device Access

Working Group Deliverable

Learning Goals

- Need to recognize importance/value of having a device
- Preparedness to leverage resource
- Available operating system & full system functionality (filtering, WiFi compatible, etc.)
- Knowledge about broadband services available & ability to pay for service
- Cost
- Payment options & methods
- Product selection support - easily understood, helps them make the purchase & overcome info overload
- Eligibility verification
- Having someone to talk to - ability to answer basic questions prior to or while making the purchase

Process

- Understand the relevance
- Who is doing the work up the line to build the relevance case?
- Is the device mine to keep?
- Is there a warranty? Is the device high-quality? Will it be worth my money?
- Do I trust the supplier and/or the program?
- Brand recognition?
- Pick up/delivery experience - convenient locations, ease of delivery
- Language support for non-native English speakers
- Multiple payment options and flexibility (could include vouchers)

Key Insights

- How to customers find out that devices are available?
- Where does our working group become involved in the buyer’s journey?
- Device lifecycle and terms of customer’s needs - do I rent or buy?
- Device lifecycle and terms of customer’s needs - do I rent or buy?
- Customer reviews
- Convenience of purchase
- Location of pick-up/dropoff delivery option?
- Online purchase option?
- Good documentation - complete package with users guide, box, etc., as close to the new for refurbished devices as possible
Digital Life Skills
Continuum of Digital Skills

Learning Goals

- What is the impact of Summer programs supporting STEM to teenagers?
- How seniors and New Americans are currently accessing help?
- How can we teach people about the uses of internet in a way that feels personal.

Introduction to Technology
- Devices & Usage
- Email & Messaging
- Internet Basics
- Safety & Privacy

Using Technology in Life
- Telehealth
- Social Media
- Banking
- Community Resources

Using Technology at Work
- Customer Service
- Productivity Software
- Communication Platforms

Careers in Technology
- Career Exploration
- Education/Training
- Credentials
- Employment Opportunities
Teen STEM Camps

Quantitative
- $366,700 was budgeted to 3 organizations to lead Summer STEM programs
- Directly impacted 1,275 Columbus City School Students

"The new computer is quite literally a godsend, as we did not have technology like that at home for her; what a bonus!"
- Student’s Mom about the CCAD Program

"I loved this and I wanna do it every summer forever <3<3<3<3 the people were great and I made a friend"
- Student’s typed feedback about the Artsway Program
Digital Life Skills

Digital Life Skills would impact various target populations

**Quantitative**
- Of the 46% that would prefer a WiFi service more if it came with access to digital life skills training:

  Perspective on Digital Life Skills Services By Age.

<table>
<thead>
<tr>
<th>Age</th>
<th>Doesn't Appreciate</th>
<th>Does Appreciates</th>
<th>Doesn't care</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-24</td>
<td>36%</td>
<td>29%</td>
<td>35%</td>
</tr>
<tr>
<td>25-34</td>
<td>45%</td>
<td>33%</td>
<td>22%</td>
</tr>
<tr>
<td>35-44</td>
<td>55%</td>
<td>13%</td>
<td>32%</td>
</tr>
<tr>
<td>45-54</td>
<td>47%</td>
<td>35%</td>
<td>18%</td>
</tr>
<tr>
<td>55-64</td>
<td>47%</td>
<td>32%</td>
<td>21%</td>
</tr>
<tr>
<td>65+</td>
<td>49%</td>
<td>30%</td>
<td>21%</td>
</tr>
</tbody>
</table>

**Qualitative**
- Residents can be quick to assume ignorance with WiFi problems
- Confusing terms include bandwidth, download/upload speeds, and mbps.

  "It is confusing when someone tries to tell you all the numbers and you don’t know what [Mbps] means.”
  – Syreeta

  "I am illiterate with this stuff (regarding speed tests), so I should know more about it.”
  – Tara

FRANKLIN COUNTY DIGITAL EQUITY COALITION
Insights From Residents

- The words “Digital Navigator” did not have meaning for residents
- People don’t want to feel stupid or like a burden when they are learning
- Many people would benefit from personalized help

For New Americans, it's about survival
For Seniors, it's about connection;
For students, it's about potential

PRIMARY AREAS OF DIGITAL LIFE SKILLS
- Introduction to Technology
- Using Technology in Life
- Using Technology at Work
- Careers in Technology

HIGHLIGHTED USER GROUPS
- New Americans
- Seniors
- Students
**Digital Life Skills**

The words “Digital Navigator” did not have meaning for residents

**Analysis**
- People don't understand the term Digital Navigator.
- The name should be changed to one that users can understand, appreciate, and trust.

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get feedback from residents about alternative names</td>
<td>“I have no clue about that...Doesn’t bring up anything to me. Maybe a game...Tablet?” – Senior</td>
</tr>
<tr>
<td></td>
<td>“[I] have never heard of that before. I don’t know what it means.” – New American</td>
</tr>
<tr>
<td></td>
<td>“Video that instructs you how to do something or a paper – I don’t know – or a person?” – Tara</td>
</tr>
</tbody>
</table>

---

**FRANKLIN COUNTY DIGITAL EQUITY COALITION**
Digital Life Skills

**Analysis**

- People want to feel heard, understood before they will accept help and be willing to admit what they don't know.
- When people contribute help of their own, they feel more willing to allow someone to help them.

<table>
<thead>
<tr>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New American</strong></td>
</tr>
<tr>
<td><strong>Senior</strong></td>
</tr>
<tr>
<td><strong>New American</strong></td>
</tr>
</tbody>
</table>

**Recommendations**

- Never make assumptions about what people know or can do; let them tell you.
- In hiring, preference empathy, patience and kindness; this is more important than the demographics of the employee.
- Consider what role shame plays in asking for and receiving help.

FRANKLIN COUNTY DIGITAL EQUITY COALITION
Many people would benefit from personalized help

Analysis

● Those with the lowest tech abilities may desire the most tailored, discrete help.
● People appreciate being met where they are.

Recommendations

● Can you have a one-on-one offering?
● Can you provide an at-home offering?
● Can you provide offerings that can be repeated again and again?

Quotes

<table>
<thead>
<tr>
<th>New American</th>
<th>“I feel like serving the newcomers separately instead of [with] people who are used to the country [is best].” –Maganey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior</td>
<td>“You can’t teach [two of my friends] – they get frustrated. They don’t get it... I don’t have the patience. They need that one-on-one minute-by-minute help.” –Michelle</td>
</tr>
<tr>
<td>New American</td>
<td>“I go to their house to teach them. I show mom Zoom and ask the older sibling to sit there with me. I teach them both at the same time.” –Maganey</td>
</tr>
</tbody>
</table>
Digital Life Skills

For New Americans it's about survival
For Seniors it's about connection
For students it's about potential

Analysis

- One interviewee's daughter went missing in 2017. She did not use a smartphone before that.
- Learning about technology seems like an extra task, people are more focused on providing for their kids and picking up the extra shift at work.

Recommendations

- Consider inserting “joy” in how you provide the offering.
- Anticipate and plan to deliver help in the moments when someone might predictably need tech help.
  - Planning transport for a new job
  - Filing paperwork with JFS

Quotes

<table>
<thead>
<tr>
<th>Senior</th>
<th>&quot;We're like a canoe out on the ocean.&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>–Juanita</td>
</tr>
<tr>
<td>New American</td>
<td>One interviewee’s daughter went missing in 2017. She did not use a smartphone before that.</td>
</tr>
<tr>
<td></td>
<td>–anonymous</td>
</tr>
<tr>
<td>Senior</td>
<td>“I like a formal class, anything where we can get together. I don't want to be by myself. I like the socialization part of it.”</td>
</tr>
<tr>
<td></td>
<td>–Gloria</td>
</tr>
</tbody>
</table>
2022 TESTING & LEARNING PRIORITIES
INTERNET ACCESS & AFFORDABILITY

2022 Learning Goals

Research & Prototyping Needed for 2022 Workstreams

DIGITAL NAVIGATORS
- Naming
  - What is the best name for this service?
- Coordination
  - Should nonprofits service the tech needs of their clients, or should there be a referral system?
- Demographic Analysis
  - What can we learn from seniors?

INTERNET COMPARISON TOOL
- ACP Analysis
  - Does the EBB to APC change the implementation strategy?

FIBER TO THE HOME
- RFI/RFP
  - What are public-private relationships? Does the EBB to APC change our implementation strategy?
- Demographic Analysis
  - What can we learn from extremely disconnected households?

SHORT TERM PILOT PROGRAMS
- Overview
  - How does access fit into the overall problem of digital divide in Franklin County?

DEVICE ACCESS
- RFI/RFP
  - What are public-private relationships? Does the EBB to APC change our implementation strategy?

RESIDENT AMBASSADORS
- Prototype
  - What are the best methods of implementation?
- Journey Mapping
  - What are some use cases to consider?
- Landscape Analysis
  - What is the donating capabilities of local organizations?
  - What are the scaling capabilities of refurbishers?

ACP Analysis
- Does the EBB to APC change our implementation strategy?

Overview
- Demographic Analysis
  - What can we learn from extremely disconnected households?

Combine RES/Nav; add resource directory to Int. Comp Tool
Fiber to the Home

Recommendation 1
Temporary WiFi Pilots

Delivering Immediate Connectivity to Low-Income Neighborhoods

**Vision**

Pilot programs provide low-cost, basic internet connectivity in select neighborhoods to close urgent connectivity gaps.

3 total pilots

- Starry
- CBRS (part 2) - SouthSide1
- Fiber SouthSide2

**Desired Benefits**

- Offer a quick solution to connectivity for households in a certain geographical footprint.

**Key Features**

- Speeds will reach 50mbps download, 20mbps upload

**Potential Implementation Approach**

- Use neighborhood engagement events to raise awareness
- Mass email send from trusted partners.

**Potential Metrics**

- Awareness measured by take-up rate of pilot programs
- Survey sent to households near the end of their pilot for measuring satisfaction.

"I recommended this program to my neighbor. She has a son and he's in school too" — Tanequa

Geographical Map of King-Lincoln Bronzeville WiFi Pilot

Flyer content for WiFi Pilot

YOUR FAMILY MAY QUALIFY FOR ONE YEAR OF FREE HOME INTERNET ACCESS THROUGH CBUS WIFI & STARRY INTERNET

Franklin County Digital Equity Coalition
INTERNET ACCESS & AFFORDABILITY

Investing in High Quality Broadband Infrastructure

VISION
Leveraging the City’s fiber assets to bring quality, low-cost internet to residents in the Mayor’s Opportunity Neighborhoods as part of the City’s Smart City program is deeply aligned with the priorities and vision for the City.

DESIRED BENEFITS
- Offering reliable broadband service
- Costing less than 1% of a households total income

KEY FEATURES
- An RFP that leverages public-private relationships to build out infrastructure in low-income neighborhoods.

POTENTIAL IMPLEMENTATION APPROACH
- Using satisfied customers from existing pilots to promote the fiber plan.
- Additional Advertising from ISPs

POTENTIAL METRICS
- Awareness measured by household pledge petitions
- Effectiveness measured take-up rate once the infrastructure is built

“[My service provider] should be able to do more, they have more equipment and cover a lot of places, they can do more.” — Michael
Integrated Adoption Model

Recommendation 2
Vision
SCALING A SOLUTION

Pairing connectivity options with wrap-around services

CONNECTIVITY OPTIONS
- Pilot Programs in Neighborhoods
- Fiber Infrastructure across City
- Internet

WRAP-AROUND SERVICES
- Device Access
- Digital Navigators
- Digital Life Skills
- Smart Care
- Resident Ambassadors
- Internet Comparison Tool

Through a Resident Ambassador, Naomi signs up for our free one-year internet pilot program – our short-term solution to access..

Upon conclusion of the pilot, the Resident Ambassador will assist Naomi in switching to a long-term plan by using the Internet Comparison Tool to simulate what she needs and compare the plans and incentives available to her.

This tool will show her that a new Fiber-to-Home option is provided in partnership with the City that is more reliable, economical, and of better quality.

Long-term, our City leverages federal funds to build-out fiber infrastructure to serve Naomi with higher speed internet.
Residents want an integrated approach

- **Device Access**: You get a new device you could use with it (i.e. tablet, laptop, etc).
- **Resident Ambassadors**: You heard from someone you know that it works.
- **Digital Life Skills**: You’d get access to digital life skills training.

![Graphs showing percentages of preferences]

- Device Access: 63% prefer new devices, 25% for table, 7% for laptop, etc.
- Resident Ambassadors: 66% prefer word-of-mouth, 22% for tables, 9% for laptops, etc.
- Digital Life Skills: 46% prefer training, 43% for tablet, 4% for laptop, etc.
Defining an Ideal Experience

The ideal experience framework defines the features, benefits and attributes of the ideal internet connectivity experience – from awareness to enrollment to use – as defined and told from the residents’ point of view.

Learning from the current experience... provides insight into existing barriers within the current system and needs within new potential services.

Exploring the ideal experience... allows us to go beyond what currently exists to create systems or processes rooted in what residents want and need.

TO INFORM

Service Design
Partnerships
Prototyping & User Testing
Resident Engagement
Marketing
Success Metrics
Residents’ ideal emotional experience is at the core of this framework.

They want to be connected. Both in the literal sense to their WiFi, and in the figurative sense of their society.

In order to develop that connectivity, they must be properly equipped and empowered.

In order to feel equipped and empowered, their services must be responsive, reliable, equity-focused, sustainable, personalized and trustworthy.
Build Programs & Capacity for Education and Awareness

Recommendation 3
Resident Ambassadors

Giving Trustworthy Testimony to Support Enrollment

VISION
Resident Ambassadors will work side-by-side with residents, coaching them through enrollment, device acquisition, digital fluency, and customized use.

DESIRED BENEFITS
- Creating a more personal and trustworthy advocate for our pilot programs and fiber options

KEY FEATURES
- Will engage in multiple neighborhood engagement events to speak with many different households.

POTENTIAL IMPLEMENTATION APPROACH
- Neighborhood engagement events which potentially include free food and devices.

POTENTIAL METRICS
- Number of people reached through recorded touchpoints.

“I recommended my neighbor [for the pilot program], she has a son and he’s in school too.”
-Tanequa
Digital Navigators

Serving as Trusted Coaches to the Ecosystem of Services

VISION

Digital Navigators are trusted guides who assist community members in internet adoption and the use of computing devices. Digital navigation services include ongoing assistance with affordable internet access, device acquisition, technical skills, and application support. (NDIA)

DESIRED BENEFITS

- Connectivity of broadband internet options
- Access to proper computers, tablets, or other equipment
- Providing information about digital literacy training

KEY FEATURES

- Introduction to technology and use in everyday life
- Support with using technology at work and developing career skills

POTENTIAL IMPLEMENTATION APPROACH

- Training Digital Navigators through a course
- Setting up spaces in libraries for Digital Navigators to meet with residents

POTENTIAL METRICS

- Number of people reached through recorded touchpoints
- I rise in connectivity for these areas, especially with Seniors and New Americans

“Since I’ve been on a program that allows me to pay my WiFi bill. It feels nice, like I’m part of society.” – River
INTERNET ACCESS & AFFORDABILITY

Internet Comparison Tool

Empowering Residents to Have Agency of Choice

VISION
The Internet Comparison Tool helps find affordable plans and understand speed in a transparent way that does not favor any option over another.

DESIRED BENEFITS
- Informs residents of their WiFi options (including low-income plans that can be hard to find)
- Shows residents how to use speed tests to ensure they are receiving what they are paying for.

KEY FEATURES
- Non-bias tool - does not receive revenue for promoting certain companies over others.
- Includes a speed simulator for helping to understand how much speed a household might need.

POTENTIAL IMPLEMENTATION APPROACH
- Tool used and advocated for by Resident Ambassadors and Digital Navigators
- Disseminated through mass email of trusted partners

POTENTIAL METRICS
- Awareness measured by website visits
- Effectiveness measured by take-up rate of pilot programs and long-term fiber option.

“Consider how many devices you are using and what they are using it for. Go with the cheapest that fits and meets your needs.” – Kristen
Deepen Understanding of Use Cases & Demographics

Recommendation 4
Telehealth Adoption

Providing Convenient and Accessible Health Care Options

VISION

An online appointment allows residents a health care option that is more accessible, convenient, and safer.

DESIRED BENEFITS

- A more accessible option for health appointments
- Eliminating the time for commuting and waiting room time for appointments.

KEY FEATURES

- Virtual conferencing for face-to-face care
- Healthcare information that is more integrated into technology

POTENTIAL IMPLEMENTATION APPROACH

- Partnering with OhioHealth, Primary One and OSU Wexner Medical Center

POTENTIAL METRICS

- Total Telehealth visits

“I do telehealth a lot; don’t like to go to the doctor’s office for 5 minutes because it takes me away from work.”

– Cierra
Device Donation Service

Distributing Needed Devices and Equipment

VISION
A scalable system of donating, refurbishing, and distributing devices to equip households with necessary technology for their tasks.

DESIRIED BENEFITS
● Offering those with in need of devices the appropriate equipment to help them with their tasks

KEY FEATURES
● A continuous process of donations, refurbishments, and distributions of sought after devices.

POTENTIAL IMPLEMENTATION APPROACH
● Multiple CBOs involvement will ensure a more sustainable and outreaching program

POTENTIAL METRICS
● Amount of Devices distributed
● # of households reached through device access programs

“[quote about devices]”

Skeptical Sara
Adopt Human Centered Approach for User Testing, Prototyping & Resident Engagement

Recommendation 5
Program Management
INITIAL SOLUTION #6

Delivering Streamlined Operations and Collaborative Planning

VISION
Smart Columbus working as a central figure for closing the Digital Divide would support a more collaborative effort for impact.
Ideally, the brand would begin to be perceived as a trusted community organization that is active within the Greater Columbus community.

DESIRED BENEFITS
● Acts as a backbone for supporting coalition initiatives

KEY FEATURES
● Leveraging key partnerships in both the public and private sectors
● A central place for receiving and distributing resources within multiple workstreams

POTENTIAL IMPLEMENTATION APPROACH
● Expanding the internal team for improved efficiency
● Expanding our partners for leveraging impact in the community

POTENTIAL METRICS
● Total funding sourced through the organization
● Large-scale connectivity metrics from the City

“It doesn’t matter to me who is running the program. Internet is a necessity.” – Mey
Process & Mindsets

Our Approach to Human-centered Design
INTERNET ACCESS & AFFORDABILITY

Process

Understand the problem

**FRAME THE PROBLEM**

**CONDUCT IN-DEPTH RESEARCH**

**MAKE SENSE OF DATA**

**REFRAME THE PROBLEM**

**Define Learning Goals**
Understanding the context of stakeholder priorities. What makes this information helpful?

**Plan Resident Engagement**
Discussion Guide and Recruiting. Who do we need to involve? What do we need to ask?

**Facilitate Interviews/Co-Design**
Facilitating one-on-one interviews or co-design sessions

**Analyze**
Organize quotes into high-level categories and begin to identify themes

**Synthesize**
Finalize key insights with statements that can be traced back to the participants.
Our Process

Generate and test new ideas

IDEATE

Ideate & Co-Design Concept
Brainstorming solutions. Based on the previous research what would mitigate the problems?

Create Design Brief
Planning for more feedback. What more must we know to determine its effectiveness?

Build Prototype
Creating a low-fidelity mockup. What new problems arise as we become more aware?

Engage Residents
Receiving Feedback. What would make this solution more beneficial to its users?

Refine Brief & MVP
Responding to user feedback. What are the next steps for implementing a helpful solution?
Our Process

Deliver initiatives

**Build Implementation Plan**
Preparation for delivery. Based on developed portfolios, how can this be best achieved?

**Design Messaging & Collateral**
Promoting Awareness. In what way will users be most motivated to try this product or service?

**Establish Partnerships**
Driving Adoption. What partners could best help the growth of this product or service?

**Engage Residents**
Receiving Feedback. What would make this solution more beneficial to its users?

**Refine Brief**
Reflecting on user feedback. What metrics best evaluate our successes/shortcomings?